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PUBLIC LANDS

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT



Our PUBLIC LANDS



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Cover

The Rio Grande Gorge in New Mexico, famed for scenery and trout fishing, became one of the first areas this fall to be developed by the Bureau of Land Management under the Accelerated Public Works Program. Elsewhere, additional recreational areas as well as range and water improvements were being started under this program—which is aimed at the conservation of human beings as well as the development of our vast natural resources.

Created in 1849, the Department of the Interior—America's department of natural resources—is concerned with the management, conservation, and development of the Nation's water, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

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DEPARTMENT OF THE INTERIOR

Stewart L. Udall, Secretary

BUREAU OF LAND MANAGEMENT

Karl S. Landstrom, Director

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Mineral Examiners

The task of the Federal Government's mineral examiners is to investigate mining claims to see if a valid discovery has been made. Under provisions of the recently passed Johnson-Church bill, enacted by the 87th Congress, persons who have lived on invalid claims for more than 7 years may be able to obtain certain rights. If you live on such a claim, contact the local office of BLM for further information about your rights.

Capitalizing Conservation . . .

Public Investment in Natural Resources Development

by James C. Rettie

Office of the Secretary
Department of the Interior

" . . . budget expenditures traditionally have lumped together capital and current outlays without distinction—a practice which would be looked on with horror by any accountant in private business."

—David E. Bell, *Director,*
Bureau of the Budget.

WHAT'S the matter with "lumping together capital and current outlays"? For the simple and obvious reason that according to sound accounting procedure it doesn't make sense. A capital outlay is made for the purpose of generating future returns. And whether it is a wise outlay or a poor one depends on those future returns—not on whether the capital outlay was possible or was not possible within the framework of a "balanced" budget.

A man whose total income is \$12,000 per year buys a house for \$20,000 and uses another \$8,000 of that year's income for family living expenses. Such a man is not *ipso facto* bankrupt. He is doing what is done every day on a very large scale throughout the Nation's economy. He invested only a small part, or possibly none, of his current income in the house, and borrowed most of the price through a mortgage loan from his life insurance company. Few people would care to argue there is anything unsound in that situation.

Making Capital Outlays

Government is continually called upon to make large capital outlays for many kinds of improvements and facilities that yield their benefits in future years—reservoirs and reforestation, range improvements, access roads, power transmission lines, measures for conservation of soil and moisture, facilities for conservation of fish and wildlife, facilities for outdoor recreation, and many others that could be listed.

Public expenditures for purposes such as these are actually investments and should be distinguished from current operating outlays. The Administration is now considering various ways by which the Federal Budget can be made more informative with regard to public investment expenditures.

Complete identification of investment expenditure is not possible with present budget accounting. But it is possible to separate out the expenditures for construction, including loans for construction.

Investment in Conservation

Construction investment made by bureaus and offices of the Department of the Interior in fiscal year 1960 have amounted to \$292 million, or 32 percent of

Department's total expenditures in the year just ending. The corresponding budgeted figure for fiscal year 1963 is \$464 million or 43 percent of budgeted expenditures. The largest items of investment are water and power development. If all investment items could properly be identified, the figures would be considerably higher.

Investment in development and conservation of natural resources has been made through the Department of the Interior for many years. A substantial part of those investments have been for improvements that involve direct repayments to the Government.

Total receipts by the Department in fiscal year 1962 are estimated at \$586 million. The comparable estimate for fiscal year 1963 is \$618 million. More than half of these totals come in the form of mineral royalties and is actually income from the liquidation of government-owned assets. Most of the remainder, however, is income from investment previously made.

Returns as Social Benefits

The concept of public investments in the resource field should not be restricted to those yielding direct monetary returns to the government. There are types of investment in which the benefits are so widely diffused, or otherwise of such a nature, that direct repayment is not practicable. Flood control and watershed management, preservation of fish and wildlife, protection of recreational and scenic values, research and development are all in that category. In many instances, returns accrue in the form of social benefits not measurable in dollars. Such returns may be just as desirable as benefits measurable by marketplace standards. It has been known for a long time that investment is one of the main forces that drive an economy forward. Without continuous new investment—public as well as private—a nation's economy grinds to a standstill or flounders in stagnation.

The need for large continuing private investment in new plants and equipment, new technology, new homes, new automobiles, and new private facilities of all kinds is generally recognized. What has not been so clearly seen is the commensurate need for continuing programs of public investment in basic resource development, and in all those other public facilities needed to keep an economy moving forward.



Opening the Door for Recreation

A NEW door opened in early November for long-neglected recreation development of the national land reserve, when 31 projects were launched under President Kennedy's Accelerated Public Works Program. Designed to give constructive employment in areas of chronic unemployment, much of the new program is aimed at preserving—and developing—the Nation's natural resources, at the same time giving human resources a much-needed lift.

The first 31 projects announced for the Bureau of Land Management involve public recreation facilities in five States, including the first begun on the national land reserve outside Oregon or Alaska.

The national land reserve has been described as a neglected recreation resource for good reason. While millions of people are already using these public lands for outdoor activities, funds have not been available to provide even the most primitive facilities except in two special situations.

Proving Grounds in Two States

Before Alaska gained statehood, some 50 recreation sites were developed by BLM on the public domain. These areas, built with special funds which Alaska was given as a territory, were turned over to the new State in 1959.



Some 2 million acres of revested Oregon & California Railroad grant lands in western Oregon—the O&C—are managed by BLM under a special act dating back to 1937. Revenues from the sale of timber and other resources on these lands are shared by law with the counties, and some of these special funds have been used for timber access roads and recreation developments. There are now some 30 sites in the 18 western Oregon counties.

While the Oregon and Alaska facilities have been limited, they have served as proving grounds for the Bureau's balanced use recreation program. Unlike areas set aside exclusively for recreation, BLM's areas must serve as many needs as possible.

New Areas in Five States

Planning for the Accelerated Public Works Program began months before the funds were allocated. Field officials were queried in areas where unemployment has been high, and dozens of possible projects were nominated. Finding areas of need was no problem for BLM; estimates run as high as 4,000 potential recreation sites needing some degree of development.

During the summer surveys of public demand helped narrow the list, and the final decision for the first allocation balanced both need for the facilities and urgent problems of economically depressed counties.

By mid-autumn, when initial allocations were made from the Congressional appropriation, BLM was ready to open its doors to job-seekers within days.

Jobs To Be Done

Areas were chosen with the recommendation of the Area Redevelopment Administration, Department of Commerce, and the Department of Labor. Eligible for selection under the program are communities where there has been substantial unemployment for at least 9 of the past 12 months, as well as areas designated under the Area Redevelopment Act because of long-term critical joblessness.

The act setting up the program requires that projects must be of a type that can be started within a

Continued on page 9 —

LEFT: New employees under the accelerated program line up to receive safety instructions before beginning trail work on the Rio Grande Gorge Recreational Area in New Mexico.

RIGHT: Hand tools are the only practical pieces of equipment in opening this rugged trail down the steep slopes beside the Rio Grande Gorge. First work began early in November.



Accelerated Public Works Means Job for Chick Wallace



ABOVE: Chick Wallace of Pioche went to work on one of the first projects in Nevada, operating a motor grader for a crew building fences on public rangelands in Lincoln County.

RIGHT: New job for Chick Wallace means a better standard of living for his family of seven children—such as groceries bought after the first day.

BELOW: A closed mine is the symbol of economic depression which has hit the little town of Pioche, Nev. Work has been scarce for Chick Wallace and others since the mine closed.



BELOW: Willing to work, men lounge along the main street of Pioche because there have been few jobs available. Major purpose of the new program is to create jobs for such people.



Opening the Door for Recreation

● ————— from page 7

reasonably short period of time, to meet an essential public need, and such that the work can be completed within 12 months. The act also stipulates that the projects must contribute significantly to reduction of local unemployment, and they must be consistent with local government plans.

In putting the act to work, BLM hired local workers, mainly through local employment offices. Wherever possible, employees were selected within the counties where the work was to be done. The need for such work was dramatically evident in one community, where 112 men were put to work two days after the money became available.

Building for the Future

While solving only a small fraction of BLM's problems in the field of recreation needs, the 31 projects launched in November show clearly why the work is needed. Pressing requirements of public health and safety, brought on by unrestricted use of the public's lands, and the need for opening new and previously inaccessible areas to lessen demand elsewhere, have combined to make the projects essential.

In Trinity County, Calif., heavy use of public lands adjacent to the Douglas City Reservoir has created a definite health problem. By channeling the users into maintained areas, everyone will benefit. Being built at the reservoir are 15 campsites and picnic areas, and access to the shore of the reservoir. More campgrounds and better access to the West Valley Reservoir and the Post Camp and Painter Flat regions are also being built in nearby Lassen County.

Access to the scenic Rio Grande Gorge is the object of another series of projects in Rio Arriba County, New Mexico. Here steep and trailless cliffs have barred sightseers and fishermen from the deep canyon. Being built are 15 miles of access roads, 16 miles of foot trails, and camping and picnic facilities for the public.

The Gerber Reservoir near Klamath Falls, Oreg., will be opened to more recreational use when the Bonanza road system is resurfaced. Other plans include a boat launching ramp and 50-family camping units, and additional work near the Parker and Chase Mountains.

Access for hikers and fishermen along the fabulous Rogue River will be improved in Douglas, Coos, and



ABOVE: Wallace and his fellow workers will spend several months on such projects as new fencing for public rangelands. Most employes in the new program come from within the county.

BELOW: Pioche is one of several hard-hit towns in Lincoln County, which has been declared a depressed area by the Area Redevelopment Administration of the Department of Commerce.



Opening the Door for Recreation

Josephine Counties elsewhere in Oregon. Motor vehicles will continue to be barred from the roadless areas of the trail, first carved out by early prospectors.

In Utah, camp and picnic grounds will be built in the Karparowitz Plateau, Sawmill Basin, and McMillan Springs areas of Garfield County. An access road will lead 7 miles into scenic Escalante Canyon, noted for its hunting.

And in Nevada, picnic grounds are to be constructed at Meadow Valley Wash in Lincoln County. More picnic facilities will be built on two colorfully named sites in Mineral County, at Lucky Boy and China Camp. To meet already heavy use in Mineral County on the shore of Walker Lake, two camps and picnic grounds are being built.

An Open Door for Recreation

The Bureau's policy has been to keep the door open as much as possible for all forms of outdoor recreation—hunting and fishing, camping, picnicking, hiking, rock-hounding, and just plain being outdoors. While welcoming the public to some 468 million acres of national land reserve and public domain, intensive use of some of the most scenic areas has meant overuse.

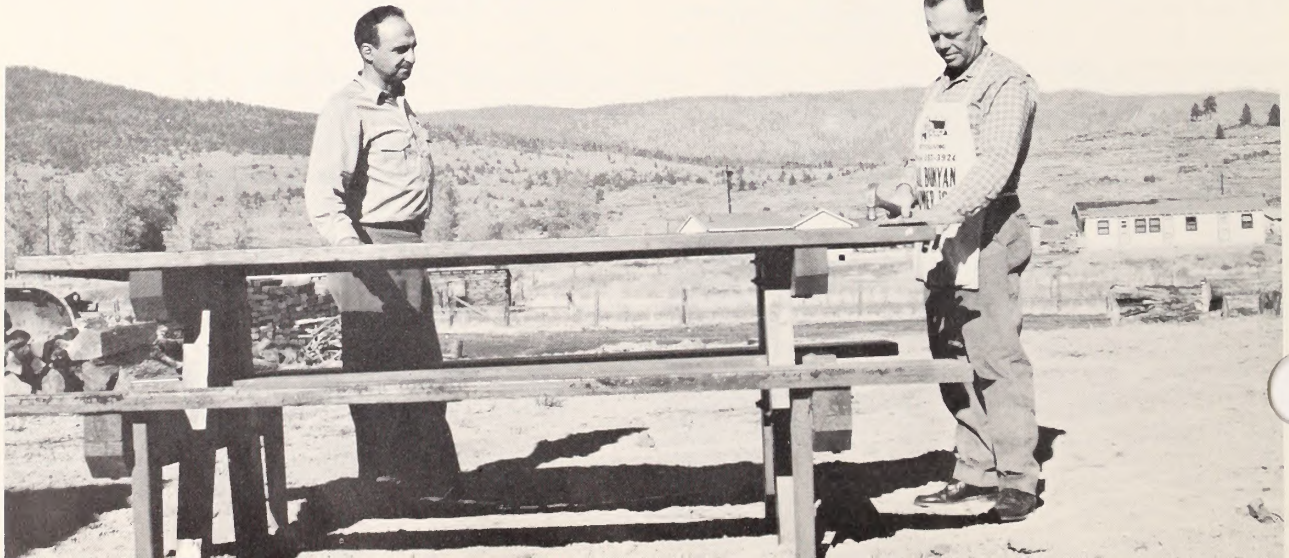
With the impetus of the new areas being constructed under the Accelerated Public Works Program, BLM is again demonstrating how the lands under its responsibility can serve a wide variety of balanced uses.



ABOVE: A fence will protect new tree seedlings from deer and livestock in the Redding District of California. The reforestation project is set for Trinity and Lassen Counties.



ABOVE: A fence comes down to provide access to a new recreational area in Garfield County, Utah, opening a large canyon to hunters and other recreationalists. **BELOW:** A picnic table is one of the first projects launched in the Susanville District of California, where needs have long been felt.



CONSERVATION BRIEFS

...FROM THE BUREAU OF LAND MANAGEMENT

BLM Offers Oil and Gas Leases Off California Coast

Competitive bids for sale of oil and gas leases on the Outer Continental Shelf off the California coast will be opened January 8 in Washington, D.C., marking the first West Coast sale of Federal oil and gas from submerged lands. Four tracts, Eureka, Point Arena, San Francisco, and Morro Bay, total 800,000 acres. Under Secretary of the Interior James M. Carr explained that until recently deep-water drilling had not advanced technically to where oil companies could feasibly drill in depths found beyond California's 3-mile limit. Drilling off Louisiana and Texas has netted billions for Uncle Sam recently.

"Petrified Wood" Bill Signed by President Kennedy

A new public law removing "petrified wood" deposits from the category of minerals subject to appropriation under the mining laws—which had passed the House at press time of the October issue—was signed into law later by the President. Effect of the new law is to treat the fossilized material as more a recreational resource, and less a commercial commodity.

Key Changes Announced in Bureau's Washington Staff

Four personnel changes were recently announced in the BLM Washington Office. Assistant Director Jerry A. O'Callaghan has exchanged responsibilities with Assistant Director James F. Doyle, with O'Callaghan now in charge of plans and legislation and Doyle assuming supervision of lands and minerals activities. Information Officer Dwight F. Rettie has transferred to the Office of the Commissioner, Fish and Wildlife Service, to direct conservation information and education activities in the Bureaus of Commercial Fisheries, and Sports Fisheries and Wildlife. William L. Mathews has been appointed Chief, Branch of Range Operations and Development in the Division of Range Management, a promotion to fill a new position.

November Rains Add to Oregon Woes; Timber Regulations Waived

Multi-million dollar timber salvaging problems in western Oregon were further complicated in late November by heavy rains—which washed out 7 miles of the Nestucca access road planned for use in removing timber felled by the October 12 windstorm (see page 14, "Columbus Day Catastrophe.") New damage was estimated at \$600,000. Meanwhile, waivers of regulations on timber harvesting were approved by the Secretary and the Comptroller General to expedite work in western Oregon. Hard-hit loggers in this area were given extensions of contracts for cutting green timber so that immediate attention could go to salvaging some of the 1.2 billion board feet downed on October 12.

Picacho Land and Wildlife Management Area Set Up in California

Establishment of the 44,465-acre Picacho Land and Wildlife Management Area in the Imperial Valley of southeastern California was announced by Under Secretary of the Interior James K. Carr. The new area extends some 25 miles parallel to the Colorado River between the Palo Verde and Picacho Mountains. The new area is the fourteenth cooperative area identified by the Department for cooperative management by BLM and the California Department of Fish and Game.

The Nevada Wild Horse Range

Haven for Wild Horses

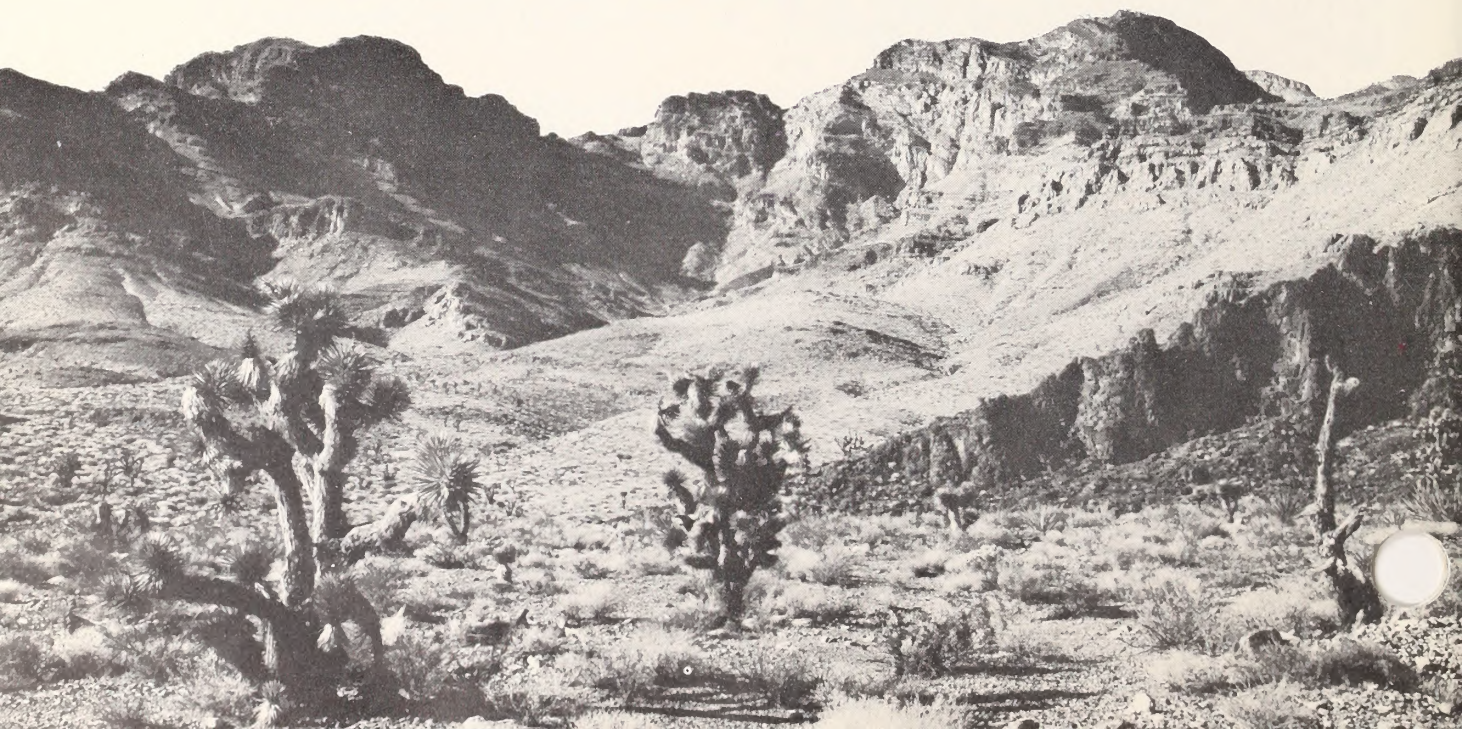
EVER since a primitive and daring man first captured a wild horse—figuring, probably, that four legs were better than two—the sight of a herd of free-ranging ponies had been one to stir the imagination. Not to say, however, that every man, woman, and child reacts the same way to such a sight. To some the wild horse is the last remaining symbol of a romantic West; to others the wild horse is a free-loader nibbling at grass which could be better put to other purposes.

For a city youngster, regimented into a routine of schoolbells and fenced playgrounds and horizons that extend to the next row of tenements, the wild horse is an untamed spirit roaming free of all restraint—enjoying a life that knows no boundaries. Stories of the picturesque herds of ponies on Okracoke and Chincoteague, and the wild horses of Wyoming and Nevada, have given wild horses as many fans as a handsome Hollywood hero—and far from all of these fans are children.

For a rancher, eyeing the grass on the range as so many dollars in the bank, the wild horse is a nuisance eating forage that could feed livestock. Often the wild horse is a carrier of disease. He holds no respect for such niceties as range conservation, and every mouthful of grass he chews at the wrong time of the year means several less later on for the cow—or the deer and the antelope that share the range.

Recognizing that there are those who love the wild horse, and that there are those who hold him a rascal and a thief, the Bureau of Land Management has worked out a solution it hopes will satisfy everyone. With the active cooperation of the Air Force, BLM has found a 435,000-acre haven for wild horses where they won't compete with domestic livestock.

With the signing of an agreement between BLM's Nevada State Director and the Commander of Nellis Air Force Base, the Nevada Wild Horse Range is a reality!



Inhabited by Wild Horses and Wildlife

The area chosen for the Nevada Wild Horse Range is in the southcentral part of the State, a rugged and desolate section where rainfall is scarce. There are no nearby communities, and most of the area is roadless.

The area has been withdrawn from the national land reserve as a practice range for Nellis Air Force Base. Domestic livestock are not permitted to graze within the target area; the only users of the forage are big game animals and scattered herds of wild horses. BLM range conservationists estimate that there are already some 200 wild horses on the range, adding that this is about the maximum number of horses that the range can be expected to support.

Ending a Long Controversy

The subject of wild horses has probably aroused more emotion-charged statements than any problem since Mrs. Murphy withdrew a pair of overalls from her Saturday-night chowder. And like any long-lasting controversy, both sides have presented some obvious truths. Standing in the middle has been the Bureau of Land Management, often a target of much resentment.

Most of the horses running free on the Western ranges are abandoned domestic stock, unwanted and unclaimed by their former owners. Little trace remains of the true mustang, descended from bands of Spanish ponies that escaped in the early years of exploration and settlement. The horses of today, however, are usually runty, unkempt animals that show their years of neglect.

Ownership of the abandoned horses is often a question that cannot be answered. Many of them are branded, often with brands of outfits long since out of business. Laws of the various States determine just what rules apply when the animals are rounded up.

No one gave serious thought to wild horses—except for long-suffering ranchers—until the mid-1950's. Then a series of articles and motion pictures, glamorizing wild horses and depicting them as fleet-footed and beautiful animals, raised protests from animal-lovers who feared they were vanishing from the range. Basis of many of the protests were methods used to corral horses later sold as pet food.

Heated exchanges took place. One admirer of the wild horses protested before a congressional hearing, "Unfeeling people interested in a fast buck use airplanes and trucks to run the animals down and cart them off 'half dead' to slaughter, for pet food."

A Western newspaper replied, "The true picture of a wild horse is a runty, moth-eaten, mangy little scrub critter of no value anywhere outside a can." The newspaper concluded, "He is a curse to the stockman, a nuisance to the big game hunter and a pain in the neck to the Bureau of Land Management, whose job it is to see that the open range is properly apportioned to feed all living animals dependent on it."

Solutions to the Problem

Congress provided the solution to one part of the wild horse problem by passing legislation halting the use of airplanes and motor vehicles in rounding up abandoned horses on public lands. This law, passed in 1959, supplements State laws preventing cruel or inhuman treatment to any animal. While the use of abandoned horses for pet food continues, sales of the animals are conducted in a humane manner and branded animals are private property—subject to sale for any purpose their owners choose.

But while recognizing that large populations of wild horses can do immeasurable harm to the open range, competing with domestic livestock and wildlife, some admirers of the wild horse have long advocated setting up a special range for their exclusive use. The Nevada Wild Horse Range is an answer to their requests.

With the encouragement of Secretary of the Interior Stewart L. Udall, BLM has been seeking such a range for some time. Unsited for domestic livestock use because of military uses and scarcity of water, the new Nevada range is one of the few tracts available that is large enough to contain a herd of free-ranging horses. Due to the vastness of the area, danger to the horses from military uses is remote.

Plans for the New Range

BLM plans to cooperate with the Air Force and the Nevada Game and Fish Commission in managing the range and in maintaining a suitable number of wild horses. As part of the agreement, BLM range conservationists will have access to the range on weekends when Air Force operations are suspended, and during special periods of inactivity. And the Air Force has agreed not to fire bullets, rockets, or missiles into the part of the range used for wild horse management activities.

BLM's problem is to serve *all* the public interests—those of the horse-lovers, who wish to see this colorful remnant preserved, and those who have an economic interest in the rangelands he roams. The Nevada Wild Horse Range assures a future for these animals, under proper supervision that will protect the range resources as well as the horses.



October 12 Windstorm

Columbus Day Catastrophe

COLUMBUS DAY, 1962, brought a gigantic headache to hundreds of thousands of residents of the Pacific Northwest, when the hurricane-force winds of October 12 lifted roofs, blew in windows, and demolished buildings. Shade trees were uprooted, powerlines snapped, and streets almost buried under broken limbs and twigs. Cleaning up the cities and towns along the course of the storm took days of back-breaking labor. But in the forests, removal of the storm's debris may take years instead of days.

When the fog finally lifted after the storm, foresters began the long task of assessing damage to standing timber in California, Oregon, and Washington. An area as large as Pennsylvania had been hit; winds of more than 100 miles per hour had leveled prime stands

of virgin Douglas fir in some of the Nation's best producing forests. Estimates from Federal agencies and private landowners place the downed timber at more than 4 billion board feet—over a third of the region's annual harvest knocked down in 1 day.

On Bureau of Land Management areas in western Oregon, salvage problems involve more than 1 billion board feet of Douglas fir—in a race against time. The Douglas fir beetle poses a serious threat; the wind-thrown timber can serve as a vast insect breeding ground.

The foresters know that the spring of 1963 will bring a horde of beetles, thriving and reproducing in the storm-damaged forests. Unless the timber is salvaged, bark beetles breeding in the bark of dead trees, would reach such proportions in 1964 that they would move into standing timber—and such an attack could add materially to present damages from the storm.

Repercussions in Lumber Market

Salvage operations resulting from the storm are expected to have repercussions in the already depressed Pacific Northwest lumber industry. Effects of dumping billions of board feet onto the market at a time when prices are already down will have to be faced.

One balancing feature of the salvage operation is its effect on the labor market, however. One spokesman for the industry pointed out that every million board feet of lumber cut means employment for 13 persons and supports 45 persons for a year.

Meeting the Challenge

Only a few days after the storm, President Kennedy called an emergency meeting in Portland, Oreg., to lay plans for salvage work. The Departments of Commerce, Agriculture, and Interior were directed to hold the meeting, with representatives from the three States and private timber owners invited.

After the October 30 to 31 meeting, Assistant Secretary of the Interior John A. Carver, Jr., announced that several conclusions had been reached by the conferees. Acknowledging that "the domestic market cannot absorb additional quantities of softwood lumber at this time at present prices," the statement adopted by the conferees declared, "for conservation reasons, downed timber must be removed, even though it produces an impact on the market."

Hopes of finding new markets were also voiced at the meeting. One suggestion stated, "Japan may be one market to absorb a portion of the increased production resulting from salvage of the wind-thrown timber."

Continued on page 16



Columbus Day Catastrophe

Faced with having enough timber to build 15,000 average homes, on the ground and susceptible to fire and insects, BLM officials in Oregon could look forward to a busy winter. Shifting timber sale emphasis from standing trees to wind-thrown timber, administrative details of handling a volume equal to an entire year's sale in salvage cuttings promised unique problems.

Aerial surveys of the storm-damaged forests will have to be followed by on-the-ground cruises to measure more accurately the extent of the loss, both in terms of present salvage and future cutting operations.

Roads into the damaged forests will have to be repaired and reopened so salvage crews can reach the downed timber. Existing contracts for sale of standing timber must be reexamined for possible changes to divert cutting to the wind-thrown logs.

As this issue went to press, regulations were being modified to permit salvage operations as rapidly as possible—so that when the insects begin their attack in the spring, they will face heavy competition from the salvage crews.

BELOW: Some of the most severe damage occurred in areas next to recently logged tracts. Here 100-mph winds swept into the unlogged timber, uprooting many trees and snapping others.



ABOVE: Hazardous work is in store for loggers salvaging the windthrown timber. In many areas green standing timber must be removed along with the downed timber in tangles like this.





BELOW: Losses from the storm will be felt for many years. Young growth, many years from maturity, suffered greatly. Scars caused by other falling trees left standing timber open to disease.

ABOVE: Many of the Bureau's recreation areas (provided by special funds under the O&C Act) were heavily damaged by the falling trees. The huge tree at right narrowly missed a toilet.



BELOW: Relatively little of the live trees felled by the wind were shattered. Most trees suffering damage such as this were already dead and rotting. Trees such as this are worthless.



An Island in Time

Natural Study Area for Junipers



DOTTING the rolling hills of eastern Oregon are more than half a million acres of one of nature's hardest dry-land trees—the western juniper.

Providing both food and hiding place for wildlife, the juniper is uniquely adapted to life in a land where water is scarce.

Recently BLM took steps to set aside a 600-acre tract of western juniper in Deschutes County, Oreg., 22 miles south of the city of Bend. Far too often, scientists say, virgin stands of trees, unmolested by outside influence, disappear before ecologists and others can completely understand all of the factors that make one plant community different from another. It is to permanently preserve an undisturbed area that the Western Juniper Natural Area is being established.

Selection of the area, known locally as Horse Ridge, came after a 2-year study by the Committee on Natural Areas of the Society of American Foresters and the Forest Service. Western juniper is 1 of the 50 forest cover types recognized in the Western United States.

Ecologists study plant communities to learn more about the relations of water, weather, soil, and other factors to the type of "climax" that results when an area is left undisturbed. Their studies reveal the keys to such mysteries as why some areas are covered with hardwoods, others with pines.

On the juniper area, scientists from the Forest Service's Pacific Northwest Forest and Range Experiment Station and BLM will cooperate in its study—which should eventually be very valuable in the Federal Government's extensive range management program. BLM's 675,000 acres of juniper woodlands in five eastern Oregon districts make up the most extensive stands in the world.

Providing Living Laboratories

Plant communities often take many centuries to reach the climax stage. While transition areas, such as abandoned farmlands, cut-over forests, and fire-scarred hillsides are relatively easy to find, virgin stands that have never been disturbed are rapidly disappearing.

Public and private organizations are seeking to set aside small representative stands of the various forest types of North America, to provide living laboratories for science and to preserve examples of living natural history.

The Horse Ridge area in Deschutes County was chosen because of its accessibility and the absence of mining, permanent occupancy, or grazing. Located south of U.S. Highway No. 20, the area has been almost free of grazing because of lack of water in the area. Rainfall averages only a few inches a year.

Patriarch of the Desert

Western juniper grows to a height of 20 to 60 feet, with a trunk as much as 3 feet in diameter. Growing on dry, rocky soil, the conifer is found from eastern Washington southward through eastern Oregon, and from southern California and western Nevada eastward to western Montana. Adding only a thin layer of wood each year, the juniper may reach 300 years in age—making it one of the patriarchs of the high desert.

While the berries and foliage of the juniper provide some food for wildlife, the densely needled branches provide hiding places for birds, and the larger animals

The juniper has a conical shape when young, with the lower branches dying as the tree grows older. Mingled with the ever-present sagebrush, juniper provides good wildlife cover.



find cover and concealment within the heavier stands of trees.

And because of its ability to survive where water is scarce, the juniper's roots make an important contribution to soil conservation by helping anchor steep hillsides.

The wood of the juniper is very durable, but is used primarily for fuel and fenceposts. Forest products specialists are working, however, to find new commercial uses for juniper chips such as manufacture of hardboard.

Looking to the Future

Today, Horse Ridge is hardly distinguishable from hundreds of near-similar ridges and hills in eastern Oregon. The conical shape of the dark green junipers stand like Christmas trees above the sagebrush and perennial grasses.

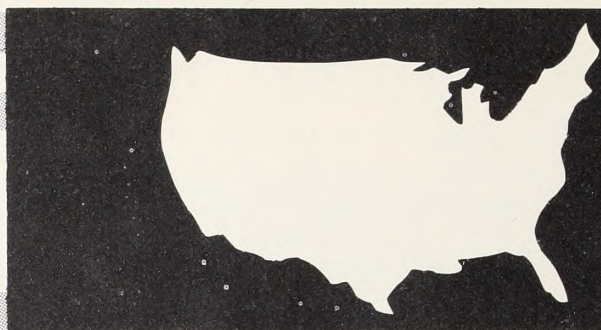
But, as new uses are found for the hard red wood of the prickly tree, perhaps most of these stands will change—as so many other forests which have yielded their materials to advancing technology. But Horse Ridge, as a natural study area, will remain as one of the islands in time.

Dark blue berries of the juniper are actually fleshy cones, with the seeds hidden inside. The sharp needles make this tree only a fair source of forage for livestock and wildlife.





active acres



Three National Seashores Created by 87th Congress

Padre Island National Seashore become the third area set aside along America's rapidly vanishing shorelines by the 87th Congress, according to a National Park Service statement.

Created earlier in the term were Point Reyes in California and Cape Cod in Massachusetts. Prior to the 87th Congress only Cape Hatteras, in North Carolina, was devoted to seashore preservation.

The Padre Island area is on the Southern Texas coast, between Corpus Christi and Port Isabel. It embraces the longest undeveloped segment of seashore in the United States portion of the Gulf of Mexico—80 miles of a 117-mile offshore bar which varies from one-eighth to 3 miles wide.

The island is subtropical, with Laguna Madre on the west and the temperate waters of the Gulf of Mexico on the east.

Named after Spanish priest Padre Nicolas Balli, the island was home of the cannibalistic Karankawan tribe when discovered by the Spanish in 1519. Padre Balli obtained rights to the island in 1800, using it to graze longhorn cattle and mustangs. Cattle continue to use the island.

The Fish and Wildlife Service has termed the island and its sur-

roundings "one of the most important wintering waterfowl habitats in the United States."

Secretary of the Interior Stewart L. Udall hailed the "foresight and vigorous action" of the Congress in "assuring the preservation of some of the outstanding beauty of our land for the inspiration of this and future generations."

Timber Thieves Hunted From Air

Timber thieves who attempt to sneak logs from isolated tracts of the national land reserve in the Ukiah (Calif.) District are under surveillance by airborne watchmen—who are using airplanes to cut the greatest single source of public timber loss in the area.

Also being spotted from the air are loggers who stray into public forests inadvertently, according to District Manager George Francis.

Francis explained that tracts of the national land reserve in his district are so scattered that effective ground reconnaissance is almost impossible.

After the aerial patrols, he added, operators cutting near BLM lands are informed of boundary locations before their operations encroach on public lands.

Early detection of trespass minimizes damage to timber, and lessens the damage charges to the trespasser, Francis said.

Use of the airplane also gives better evidence in cases of deliberate and flagrant trespass. Stakes are high in the Ukiah area, where some 30,000 acres of commercial timber land produces 20,000,000 board feet each year.

Reclamation to Test Evaporation Retarding Chemical in New Mexico

Aerial applications of a chemical to retard evaporation were tested in September and October by the Bureau of Reclamation, in efforts to find new ways of cutting water loss from large reservoirs.

Tests were made at Elephant Butte Reservoir, near the town of Truth or Consequences, N. Mex.

The current series of tests were made to observe effect of various weather conditions on aerial applications of a one-molecule-thick chemical layer on the water surface.

The monolayer chemical is a mixture of the fatty alcohols n-hexadecanol and n-octadecanol—both tasteless, odorless, and harmless to living matter.

Annual water loss from lakes and reservoirs in the West due to evaporation totals an estimated 14 million acre-feet—10 times as much water as used by the city of New York's 8 million people in a year.



Helitack Crews Fight Fires in Idaho

A new weapon was successfully used against range fires in the Salmon (Ida.) District of the Bureau of Land Management during the 1962 fire season. The new technique, Helitack, holds great promise for the future.

A helicopter is used to transport men and supplies to fires quickly and is especially useful in rugged terrain. The photograph shows Joe Houver bailing out of a low-flying helicopter at the Salmon office. Practice drops of fire-fighting equipment and supplies were also carried out during these same exercises from an airborne helicopter.

During the past fire season the Salmon district had two helitack crews, each consisting of six men, three of which are specially trained to jump from the helicopter while it is hovering above the ground.

On their first fire, the crew successfully held a lightning strike fire in timber to one-half acre.

Is There a Ghost Town in Your Future?

Unless you happen to live in a ghost town already, chances are there isn't a ghost town in your future. But a surprisingly large number of people write to the Bureau of Land Management asking, "How can I buy a ghost town," "How can I find a ghost town," or "Can I get a map showing the location of ghost towns?"

Most people have only a vague idea as to what a ghost town is. To most people a ghost town is a deserted mining village, with a single dusty street with tumbleweeds and false-fronted buildings like the one in the photograph. But many

other towns have declining populations. Cities as large as Boston are losing population, but few would call Boston a ghost town.

But, just as in Boston, the land in so-called ghost towns was at one time privately owned, and unless the land has reverted to local governments for nonpayment of taxes, the towns are still privately owned. The Federal Government would in no case own the towns. This is why there are no maps available showing the location of ghost towns.

Local chambers of commerce or automobile clubs might in some cases be able to provide information about deserted towns in a particular region.



Oregon Steelhead Make Comeback

Winter steelhead runs in the Umpqua and Rogue Rivers are making a comeback, according to fishery biologists of the Oregon Game Commission. Winter steelhead tallied through the counting station at Winchester Dam on the Umpqua totaled, 7,170 fish for the season, up 38 percent over the previous year and about 13 percent over the parent run.

On the Rogue River, scene of a recent BLM motion picture, the count was over 11,000 fish—a 15-percent increase over the previous year and 45 percent greater than the average for the past 10 years.

The spawning population in the

Applegate River was also one of the largest observed since the Oregon Game Commission began studies in the Rogue basin in 1941. The Applegate supported a bare trickle of steelhead only a few years ago, and virtually no fishing.

According to past records, the Applegate once supported excellent steelhead runs, but unscreened irrigation canals of 20 and 30 years ago almost wiped them out. The most significant of several factors contributing to the steelhead's comeback in the Applegate was the screening of all irrigation ditches some 15 years ago. Since then, records show a gradual buildup in the runs with the greatest number observed this past winter.

Management Service Associations Suggested for Small Forests

Forest management service associations providing supervision for small parcels of privately owned forest lands were proposed recently by Charles H. Stoddard, Director of Interior's Resources Program Staff.

Speaking before the New York State Forest Landowners Forum, he pointed out that forested tracts of less than 5,000 acres comprise 61 percent—259 million acres—of the Nation's 485 million acres of commercial forests, yet many of these woodlands are too small to

Missing Reindeer Return to BLM Range in Western Alaska Tundra

Eight missing reindeer have mysteriously returned to the 43,000-head herd grazing on BLM's western Alaska tundra range. They were absent during Christmas holidays. All eight appeared exhausted, as if they had been on a long journey. Otherwise, range conservationists reported, the animals were in good condition.

Just before the disappearance in mid-December, Eskimo herdsman observed a red-suited and furtive gentleman wandering through the herd, calling "Here

Donner, here Blitzen!" Shortly afterward, they said, the eight animals were gone.

The western Alaska herd ranges over some 29,000 square miles of tundra managed by the Bureau of Land Management. The animals were originally introduced from Russia around 1890, and are now owned and managed by Eskimos and Indians. Federal law prohibits ownership by nonnatives.

The photograph shows part of the herd during a July reindeer roundup, when the antlers are still in velvet. Both bulls and cows have antlers.



of economic size which would enable owners to manage or develop them properly.

Stoddard added that the forest management associations could be expected to "manage and regulate hunting, fishing, and other recreational uses for income to owners, as well as to develop and improve wildlife habitat."

California Mercury Mine 100 Years Old, Still Showing Profit

The Abbott Mine in Lake County, Calif., has contended with complex local geology making its mercury ore difficult to locate and extract—but still shows a profit after a century of operations. The mine is still one of the State's leading producers of the liquid metal.

Interior's Bureau of Mines has described the Abbott operation in a 35-page report, explaining exploration, development, auxiliary operations, furnacing, ventilation, safety systems, underground transportation, and cost figures.

The report is available for 60 cents from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. The report is Bureau of Mines Information Circular 8109.



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This dramatic mid-winter glimpse of two fleet-footed bighorn sheep was captured on film by Shin Koyama, photographer for the North Dakota Game and Fish Department—who found the scarce big game animal on one of the few remaining tracts of the national land reserve in North Dakota.